

Title (en)  
LARGE CORE AREA SINGLE MODE OPTICAL FIBER

Title (de)  
EINZELMODUS-GLASFASER MIT GROSSEM KERNBEREICH

Title (fr)  
FIBRE OPTIQUE MONOMODE À GRANDE ZONE DE C UR

Publication  
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Application  
**EP 11797636 A 20110627**

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Abstract (en)  
[origin: WO2011160646A1] The invention relates to a single-mode optical fiber for guiding an optical signal. The core region of the optical fiber is capable of guiding an optical signal in a fundamental core mode at an optical signal wavelength. A cladding region is arranged to surround the core region and comprises an inner cladding region and an outer cladding region. The inner cladding region comprises a background material and a plurality of inner cladding features arranged in said background material, wherein a plurality of said plurality of inner cladding features are of a first type of feature. The first type of feature comprises an air hole surrounded by a high-index region comprising a high-index material that is larger than the refractive index of the inner cladding background material. The plurality of said first type of feature supports an optical mode with an effective refractive index,  $n_1$ , which is lower than the effective refractive index of the fundamental core mode at said optical signal wavelength. The optical fiber may comprise an active material and be used as a cladding pumped fiber amplifier.

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